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LM/2/0601

EXAMINER

CHUNG, P

ART UNIT

PAPER NUMBER

2784

DATE MAILED:

06/01/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/493,004

Applicant(s)

YELLIN

Examiner

Phung Chung

Group Art Unit

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—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☒ Responsive to communication(s) filed on 1/28/00
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-27 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-3, 5, 14, 18 and 22-25 is/are rejected.
- ☒ Claim(s) 4, 6-13, 19-21 and 26-27 is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_ ☐ Interview Summary, PTO-413
- ☒ Notice of References Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other \_\_\_\_\_

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1. The disclosure is objected to because of the following informalities:

On page 4, Equation 4, "Estimad RSM" should be changed to -- Estimated RMS--. Appropriate correction is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

3. Claims 1-3, 5, 14, 18 and 22-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Yang (5,671,221).

As per claim 1, Yang discloses in Fig. 3 a method for processing a received signal from a fading channel comprising the steps of: detecting the fading characteristics of the fading channel and determining a quantization correction for the received signal using a channel estimator 22, a channel selector 24, a RAKE receiver 12, and a diversity combiner 16.

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As per claim 2, Yang further discloses in Fig. 3 quantizing the received signal according to the quantization correction using a normalizer/quantizer 18.

As per claim 3, yang further disclose in Fig. 3 a Viterbi soft decoder 20 for decoding the quantized signal.

As per claim 5, Yang further discloses in Fig. 3 a RAKE receiver 12 for demodulating the received signal.

As per claim 14, Yang discloses in Fig. 3 a receiver for receiving a signal from a fading channel including a reception unit, a demodulator comprised of RAKE receiver 12, a decoder comprised of Viterbi soft decoder 20 and a quantizing device including a channel fading detection unit and processor for correction of fading comprised of channel estimator 22, a channel selector 24, a RAKE receiver 12, a diversity combiner 16, and a quantizing unit comprised of normalized/quantizer 18 for quantizing the demodulated signal to produce a quantized signal to be decoded by the decoder.

As per claim 18, Yang discloses in Fig. 3 a receiver for receiving a signal from a fading channel including a reception unit, a demodulator comprised of RAKE receiver 12, a decoder comprised of Viterbi soft decoder 20 and a channel fading detection unit and processor for correction of fading comprised of channel estimator 22, a channel selector 24, a RAKE receiver

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12, a diversity combiner 16, and a quantizing unit comprised of normalized/quantizer 18 for quantizing the demodulated signal to produce a quantized signal to be decoded by the decoder.

As per claim 22, Yang discloses in Fig. 3 a receiver for receiving a signal from a fading channel comprised of a demodulator comprised of RAKE receiver 12, a quantizing processor comprised of quantizing processor including a channel fading detection unit and processor for correction of fading comprised of channel estimator 22, a channel selector 24, a RAKE receiver 12, a diversity combiner 16, and a quantizing unit comprised of normalizer/quantizer 18 for quantizing and normalizing the demodulated signal to produce a quantized signal to be decoded by a Viterbi soft decoder 20.

As per claim 23, Yang further discloses in Fig. 3 and col. 5, lines 64-67 and col. 6, lines 1-8 wherein the received signal is a DS-CDMA signal and the demodulator is a rake receiver.

As per claim 24, Yang further discloses in Fig. 3 a diversity combiner 18 by summing the channel taps of selected fingers.

As per claim 25, Yang further discloses in Fig. 3 a Viterbi soft decoder 20.

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4. Claims 4, 6-13, 15-17, 19-21 and 26-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. This is a continuation of applicant's earlier Application No. 09/103,683. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing

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date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung My Chung whose telephone number is (703) 305-9686.

The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.



PHUNG M. CHUNG  
PRIMARY EXAMINER